moult at this age is by no means consistent within a species, and the instability of this feature provides scope for work upon affinities and evolutionary characters that could be of considerable value to the systematist.

References:
Williamson, K., 1961. Sequence of Post-nuptial Moult in the Starling. *Bird Migr.* II. 43–45.
Witherby *et. al.*, 1940. *The Handbook of British Birds*, London.

Some remarks on an anomalous gull

by James M. Harrison

Received 24th December, 1964

On 20th September 1964 a gull was observed on one of the ballast waters in the Sevenoaks area which it frequented between that date and 5th October.

Its field characters were so extremely anomalous, and as both races of the Lesser Black-backed Gull, i.e. *Larus fuscus fuscus* L., and *L. f. graellsii* A. E. Brehm are regular and common visitors and passage migrants to the water, it was possible to make frequent comparisons under good conditions. As at no time during the above period was it possible to make a definite field determination, it was decided to collect the bird which is a female.

In life the following points were noted; firstly the mantle lacked the intensely black quality of the Scandinavian Lesser Black-backed Gull and appeared to be somewhat lighter than that of the British form of that species, though it was much darker than the mantle of the Herring Gull.

Secondly, and quite the most striking of the field characters presented by the individual was the very dark and heavy striations of the head and neck, and these markings extended on to the breast. In the field, when at rest with its head down on its shoulders, it had the appearance of having a white collar.

In size, in the field, it seemed to be about as large as a Lesser Black-backed Gull. Its bill was yellow with a bright red spot on the gonys, and the legs and feet were putty-coloured. There appeared to be several such individuals, but less strongly marked. This last circumstance finds support in the fact that a bird of this type was observed in the same area during the last three months of 1964.

The problem presented of course as to whether or not one of the eastern forms of the *Larus argentatus—L. fuscus* complex was involved.

In view of the lack of such material in this country it was decided to submit the skin to Professor K. H. Voous for his opinion and it was also sent to Dr. Goethe for opinion. Professor Voous studied this bird most carefully and came to the conclusion that it was definitely of no known *Larus* species or race of that genus, in fact he wrote "a gull like yours should not exist, indeed it *does* not exist. Bird watchers should congratulate themselves when never seeing a gull like this: it would give them nightmares, for it is not identifiable." Voous states that its wing is too small for *Larus fuscus heuglini* and the bill is too short and too thin; also that the mantle lacked the dull grey tinge of the North Siberian gulls, and that the striations of the head and neck were too heavy. He points

out that the colour of the legs does not suggest pure *heuglini*, and that "gull populations intermediate between yellow-legged *heuglini* and the eastern *birulae* or *vegae* with flesh coloured legs, tend to be larger still, with more heavy beaks and mostly lighter mantle coloration." The North American *L. occidentalis* which has a somewhat similar mantle colour is, however, again even larger. The shortest bill (exposed culmen) in the American species is 51 mm., whereas the anomalous specimen is only 47.5 mm. Nor does *occidentalis* ever develop such a heavily striated head. Other forms of the *L. argentatus* complex such as *michahelles* and *atlantis* are larger still and have much heavier bills, bright yellow legs and never such heavily striated heads.

Professor Voous writes "Still, your bird definitely belongs to the *argentatus–fuscus* group on account of the grey 'tongues' on the inner webs of the outer primaries, also the red spot near the tip of the lower mandible is indication of its relationship.

When no 'pure' forms or species can be found to match with a specimen, the question of a hybrid has to be considered. This is the more hazardous as you wrote me to have observed at least four specimens of gulls of this kind. Still at present I see no other possibility."

Continuing, Professor Voous stresses the following points:—

(1) the dark, *bluish*-grey tinge of the mantle, which could not be matched with any member of the *argentatus–fuscus* group.
(2) the thin, slender and short bill.
(3) the colour of the legs, in tone somewhere between flesh-coloured and yellow.

The above strongly suggest a hybrid which could have resulted from the reciprocal cross between *argentatus* x *fuscus*, the size being small (though not too small).

Professor Voous thinks, however, that it is more likely that *L. fuscus* subsp. x *L. canus* is involved.

However, he writes "But I am fully aware that it is most unlikely that three or four hybrids have turned up and have kept together throughout at least four years of their lives."

Dr. Goethe makes the following comments (*in litt.* 31. vii. 64) "Indeed, this is an odd bird, and I examined it for many hours before I read Dr. Voous's opinion. It is funny that my first idea was a hybrid between Common Gull and Lesser Black-backed Gull because of the extraordinary dense mottling. It is known that the eastern subspecies of *L. canus* (*L. c. heinei* or *major*) in its winter plumage is heavily striated. But I can't imagine that this very dark subspecies of *L. argentatus* or *L. canus* can be one of the parent species. That there appeared to be others of similar type makes it difficult to think in terms of a hybrid individual. On the other hand the colour of the legs and the relatively late moult, together with the other circumstances support the possibility of a hybrid."

With reference to the presence of several of the same type. Believing that various breeding colonies of the two species exist in proximity probably along an extensive coastline to the north-east of the British Isles, and that at points along this line possibly more than one such hybrid pair might exist, and furthermore, probably all the individuals of such breeding hybrid pairs would travel along the same migratory route to the

south-west, then the possibility that several such hybrid progeny might converge, meet, and be observed in company in one place is not so very unlikely, and they need not of course be actual siblings in this case, but merely birds of similar genetic constitution from a similar broad breeding area, meeting by chance on the same migratory path.

This hypothesis, as already stressed, would appear to be supported by the observation of another such individual being seen in the same locality about a year later, when incidentally its characters had become accentuated by virtue of an added year!

From the valuable opinions given above, and taking into consideration the highly suggestive characters presented by the specimen and its quite anomalous appearance in the field, it would seem that hybridisation offers the best explanation.

Anomalous gull ♀ 5th October, 1963, Sevenoaks.

In support of this there is the paper by Steinbacher (1938) in which a cross between these two species is recorded. In this instance hybridisation between a Common Gull, *Larus canus* Linnaeus and a Lesser Black-backed Gull, *L. fuscus fuscus* L. occurred in the Berlin Zoological Gardens in two consecutive years, *i.e.* in 1935 and 1936; one young bird from each season was reared. In this paper (see Plate IV, Fig. 5) an adult of this cross is seen with an adult *L. f. fuscus*. The photograph was taken during the summer, and shows the comparative darkness of the mantles of the hybrid and the adult of the Lesser Black-backed Gull.

The characters of the Sevenoaks specimen are shown in the accompanying plate.

The measurements in mm. of this specimen are as follows:—

w.	=	400
b.	=	47.5
t.	=	63
tl.	=	146

ACKNOWLEDGEMENTS

I would express my indebtedness to Dr. Jeffery Harrison who collected the specimen, and to Dr. Pamela Harrison for the photograph.

My debt to Professor K. H. Voous and to Dr. F. Goethe, is obvious, for the very exhaustive comparison with all other possible forms which were relevant to the problem, and for their carefully considered opinions, which quite independently reached the same conclusion.

Reference:

Steinbacher, G., 1938. "Zur Ethologie unserer einheimischen Mövenarten". *Ber. des Vereins Schlesischer Ornithologen*, Heft 3/4, pp. 42–46.

The nesting, eggs and young of the Saddle-bill Stork, *Ephippiorhynchus senegalensis* (Shaw)

by CHARLES R. S. PITMAN

Received 24th November, 1964

Although the Saddle-bill is widely distributed through much of Africa south of the Sahara, twenty years ago little had been recorded, and little was known, about the eggs.

Such information as was then available appears to have been based to a great extent on three eggs at the British Museum (Natural History), two of which from the Gould collection (made in South Africa) are unmistakable eggs of the Secretary Bird, *Sagittarius serpentarius* (Miller) measuring 78.4 x 57.4 mm. and 77.0 x 56.4 mm., are end blown and damaged; the other purchased from Taylor is of a Saddle-bill and a much damaged specimen, dimensions approximately 76 x 58.3 mm.

Schönwetter (1960) referring to these eggs at the British Museum (Natural History) comments that they have more the appearance of the eggs of *serpentarius* which they resemble in outline and that they are more tapering than those of other storks.

The British Museum eggs are referred to by Stark and Sclater (1906), Bannerman (1930), Priest (1933) and Austin Roberts (1940), but there is no reference to them in Jackson (1938). Chapin (1932) quotes Heuglin (1873), who found the Saddle-bill breeding on the Upper Nile in January and February, on acacias in the midst of swamps—the eggs dull white and of coarse texture, measuring 76–80.5 x 56–57.5 mm.: Nehrkorn's (1910) bare reference to the egg of this stork "80.5 x 57.5 mm. Central Africa" is presumably based on Heuglin's eggs.

Priest (1948), referring to Southern Africa "Breeds in June and July" and the nest "is built in very tall trees, alongside the big rivers . . . a large structure is firmly built on to stout boughs" which is not particularly explicit. The eggs are "Dull white, coarse in texture and slightly glossed", and measuring "77 x 57 mm.; 76–80.5 x 57.5 mm." (the latter presumably are Heuglin's measurements). Mackworth-Praed and Grant (1952) refer to "A large stick nest in trees", coupled with the inaccuracy "Egg one". The egg measurements "about 78 x 57 mm." and the description "dull white, covered with minute pores" are similar to what Priest (1933) records "according to Sclater". Further, Praed and Grant record breeding White Nile in November, January and February (the last two presumably